

**Abstract**

Described is a process for sterilizing objects in a sterilization chamber in which a vacuum prevails, in which sterilization chamber a vapour mix consisting of water steam and hydrogen peroxide steam is fed without the use of carrier gas. The vapour mix is deposited in the form of a condensate layer abruptly on the surfaces of the objects to be sterilized and on the surfaces of the sterilization chamber. The condensate layer is subsequently sucked out by means of further evacuation of the sterilization chamber. In accordance with the present invention, the surfaces of the objects to be sterilized and/or the surfaces of the sterilization chamber are pre-heated to a pre-determined temperature.